

IN THE CLAIMS:

Claims 1-107 (Canceled).

108. (Currently Amended) A die set for at least partially forming ~~an at least partially a~~ metal blank into a structural component, said die set comprising a first die member, a second die member and a shape imparting shell; said shape imparting shell formed from a low permeability~~[[,]]~~ and rigid material, said shell being at least partially in the form of first and second shell portions, each of which includes an inner surface defining ~~[[said]]~~ a predetermined shape, an outer support and mounting surface and spaced lateral edges which edges define a parting plane between said two shell portions when said two shell portions are brought together to at least partially form said shell; ~~providing a~~ said first die member ~~[[with]]~~ including an upper side and a lower side and having a support framework to carry said first shell portion, ~~mounted in said~~ support framework ~~[[by]]~~ including a first compression force transmitting material ~~with said laterally spaced edges of which engages and supports said outer support and mounting surface of said first shell portion, said first shell portion~~ facing outwardly from said lower side of said first die member, said first compression force transmitting material having ~~different physical properties from a hardness that is less than~~ said first shell portion; ~~and, providing a~~ said second die member ~~[[with]]~~ including an upper side and a lower side and having a support framework for carrying said second shell portion, ~~mounted in said~~ support framework ~~[[by]]~~ including a second compression force transmitting material ~~with said laterally spaced edges of which engages and supports said outer support and mounting surface of said second shell portion, said second shell portion~~ facing outwardly from said upper side of said second die member, said second compression force transmitting material having ~~different physical properties from a hardness that is less than~~ said second shell portion; at least one of said die members

being movable to capture said blank in said shape imparting shell.

109. (Previously Presented) The die set as defined in claim 108, wherein said rigid material includes ceramic having a high hardness.

110. (Previously Presented) The die set as defined in claim 108, wherein said rigid material includes fused silica.

111. (Previously Presented) The die set as defined in claim 108, wherein said rigid material includes fused silica impregnated with nitrogen.

112. (Previously Presented) The die set as defined in claim 108, wherein said rigid material includes a material selected from the class consisting of silicon nitride, silicon carbide, beryllium oxide, boron oxide, and zirconium.

113. (Previously Presented) The die set as defined in claim 108, wherein at least one of said first and second compression force transmitting materials include castable ceramic having a strength and hardness substantially less than said rigid material of at least one of said first and second half shells.

114. (Previously Presented) The die set as defined in claim 108, wherein said framework is machined metal.

115. (Previously Presented) The die set as defined in claim 114, wherein said machined metal is aluminum.

116. (Previously Presented) The die set as defined in claim 108, wherein said predetermined shape has an axial profile.

117. (Previously Presented) The die set as defined in claim 108, wherein at least one of said die members includes at least one induction coil.

118. (Previously Presented) The die set as defined in claim 117, wherein at least one of said die members includes a plurality of induction coils spaced axially along said shell.

119. (Previously Presented) The die set as defined in claim 118, wherein said plurality of induction coils are non-uniformly spaced axially along said shell.

120. (Previously Presented) The die set as defined in claim 118, wherein said plurality of induction coils are non-uniformly spaced from at least one of said first and second shell portions.

121. (Previously Presented) The die set as defined in claim 118, wherein said plurality of induction coils have varying flux field permeabilities.

122. (Previously Presented) The die set as defined in claim 108, wherein at least one of said die members includes a flux concentrator.

123. (Previously Presented) The die set as defined in claim 108, wherein at least one of said die members includes a Faraday shield.

124. (Previously Presented) The die set as defined in claim 108, including a quench station to at least partially quench said structural component at least partially along a length of said structural component.

125. (Previously Presented) The die set as defined in claim 108, including a pressure sensor to sense the pressure of said fluid in said shell and a pressure controller to at least partially control the gas pressure of the gas forced into said blank.

126. (Currently Amended) A die set for forming an elongated metal blank with at least two ends into a structural component, said die set ~~comprises~~ comprising a first die member, a second die member and a shape imparting shell, said shape imparting shell formed from a low permeability[[,]] and rigid material that [[is]] at least partially engages and is at least partially supported in a non-magnetic material, said shell including an inner surface defining a predetermined shape and divided into at least two portions, said low permeability[[,]] and rigid material of said shell having ~~different physical properties from a hardness that is greater than~~ said supporting non-magnetic material; ~~providing a~~ said first die member carrying a first portion of said shell ~~mounted supported~~ in said supporting non-magnetic material; ~~and, providing a~~ said second die member carrying a second portion of said shell ~~mounted supported~~ in said supporting non-magnetic material; ~~whereby~~ said first die member [[is]] movable relative to said second die member to capture said metal blank in said shape imparting shell.

Claim 127 (Canceled).

128. (Currently Amended) The die set as defined in claim ~~127~~ 126, wherein said supporting non-magnetic material has a strength and hardness substantially less than said low permeability, rigid material of said shell.

129. (Previously Presented) The die set as defined in claim 126, wherein said low permeability, rigid material includes ceramic having a high hardness.

130. (Previously Presented) The die set as defined in claim 126, wherein said low permeability, rigid material includes fused silica.

131. (Previously Presented) The die set as defined in claim 126, wherein said rigid material includes fused silica impregnated with nitrogen.

132. (Previously Presented) The die set as defined in claim 126, wherein said low permeability, rigid material includes a material selected from the class consisting of silicon nitride, silicon carbide, beryllium oxide, boron oxide, and zirconium.

133. (Previously Presented) The die set as defined in claim 126, wherein at least one of said die members has a framework that includes machined metal.

134. (Previously Presented) The die set as defined in claim 133, wherein said machined metal is aluminum.

135. (Previously Presented) The die set as defined in claim 126, including at least one heating element positioned adjacent said shell.

136. (Previously Presented) The die set as defined in claim 135, wherein said heating element includes a plurality of conductors axially spaced along said shell.

137. (Previously Presented) The die set as defined in claim 135, wherein said plurality of conductors are positioned at different distances from said shell.

138. (Previously Presented) The die set as defined in claim 135, wherein said plurality of conductors are spaced a different distance from one another.

139. (Previously Presented) The die set as defined in claim 135, wherein said plurality of conductors have varying flux field permeabilities.

140. (Previously Presented) The die set as defined in claim 126, including a flux concentrator.

141. (Previously Presented) The die set as defined in claim 126, including a Faraday shield.

142. (Previously Presented) The die set as defined in claim 126, including a quench station to at least partially quench said structural component at least partially along a length of said structural component.

143. (Previously Presented) The die set as defined in claim 126, including a pressure sensor to sense the pressure of said fluid in said shell and a pressure controller to at least partially control the gas pressure of the gas forced into said blank.

144. (New) A die set for forming an elongated metal blank with at least two ends into a structural component, said die set comprising a first die member, a second die member and a shape imparting shell, said shape imparting shell formed from a low permeability and rigid material that at least partially engages, and is at least partially supported in a non-magnetic support material, said
5 shape imparting shell including an inner surface defining a predetermined shape, said shape imparting shell divided into at least two portions, said low permeability and rigid material of said shell having a hardness that is greater than said non-magnetic supporting material, said shape imparting shell including fused silica impregnated with nitrogen; a material selected from the class consisting of silicon nitride, silicon carbide, beryllium oxide, boron oxide and zirconium; or mixtures
10 thereof; said first die member carrying a first portion of said shell supported in said supporting non-magnetic material; said second die member carrying a second portion of said shell supported in said supporting non-magnetic material; said first die member movable relative to said second die member to capture said metal blank in said shape imparting shell.

145. (New) The die set as defined in claim 144, including at least one heating element

positioned adjacent said shell, said heating element including a plurality of conductors axially spaced along said shell.

146. (New) The die set as defined in claim 145, wherein said plurality of conductors are positioned at different distances from said shell.

147. (New) The die set as defined in claim 145, wherein said plurality of conductors are spaced a different distance from one another.

148. (New) The die set as defined in claim 146, wherein said plurality of conductors are spaced a different distance from one another.

149. (New) The die set as defined in claim 145, wherein said plurality of conductors have varying flux field permeabilities.

150. (New) The die set as defined in claim 145, including a flux concentrator.

151. (New) The die set as defined in claim 145, including a Faraday shield.

152. (New) The die set as defined in claim 145, including a quench station to at least partially quench said structural component at least partially along a length of said structural component.

153. (New) The die set as defined in claim 144, including a pressure sensor to sense the pressure of said fluid in said shell and a pressure controller to at least partially control the gas pressure of the gas forced into said blank.